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S. Maes

1029-2000-0154051 (P) 8728-376

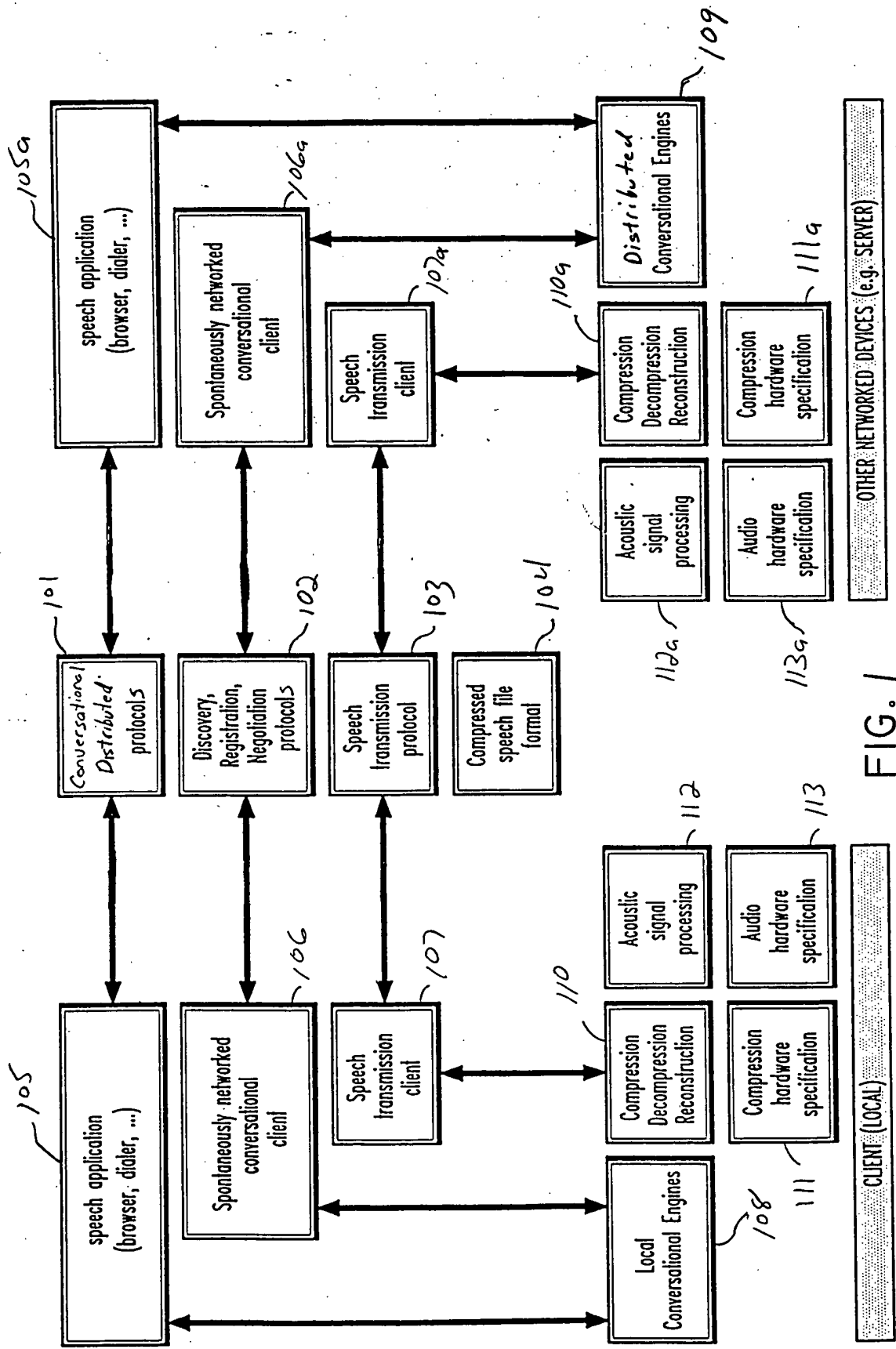
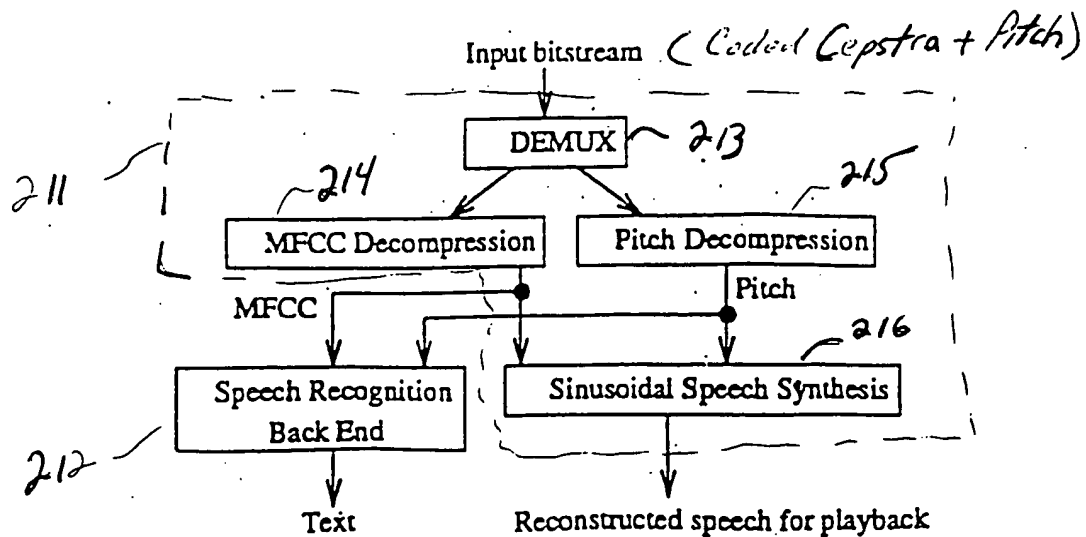
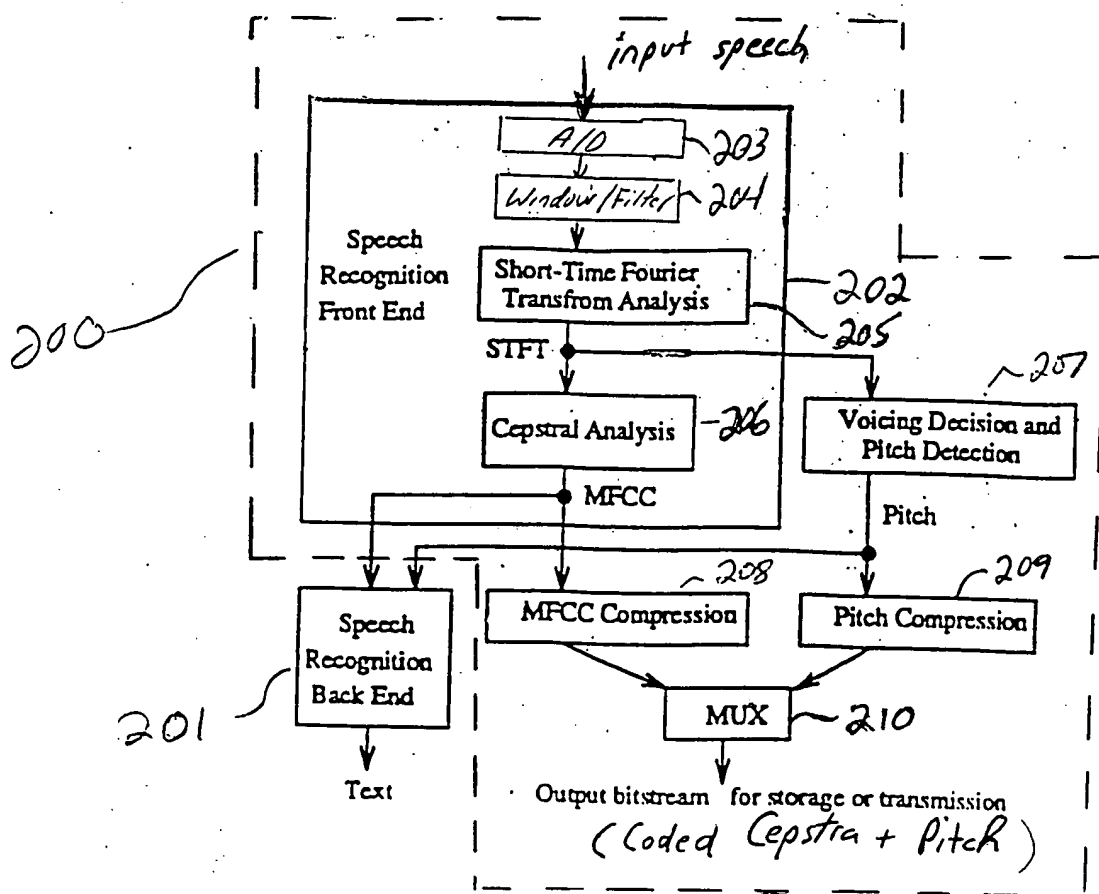


FIG. 1



RecoVC File Header

Field Name	MIO	Number of bytes	Value(s)	Description
Recovc magic number	M	4 bytes	0x2E727663	A fixed value which equals "rvc" in ASCII representation. Used to verify that this is indeed a RecoVC file.
Header length	M	2 byte	$13 \cdot (2^{16} - 1)$	Total number of bytes in this header
Version Major	M	1 byte	0-255	File format major version number
Version Minor	M	1 byte	0-255	File format minor version number
Frame duration	M	1 byte	0x00	In index into the frame duration table below. Currently, only 10 msec frames are supported.
Frames per block	M	1 byte	1-255	Each block can contain one intra-frame only, or one intra-frame with up to 244 additional inter-frames.
Sampling rate	M	1 byte	0x00, 0x01 or 0x02	Index into sampling rate table below.
Cepstra dimension	M	1 byte	0x00 or 0x01	Index into Cepstra vector dimension / type below
Language	M	1 byte	0x00	Index into language table below
Profile	M	1 byte	0x00 or 0x01	Index into profile table below
Total frames	O	4 bytes	$0 \cdot (2^{32} - 2)$ or 0xFFFFFFFF	Total number of audio frames in this file, INCLUDING silence frames.
Total speech frames	O	4 bytes	$0 \cdot (2^{32} - 2)$ or 0xFFFFFFFF	Total number of audio frames in this file, EXCLUDING silence frames.
< Ancillary Data >	O			Reserved for future usage

Fig 4

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Frame Duration Table

Code	Duration (msec)
0x00	10
0x01 - 0xFF	Reserved

Sampling Rate Table

Code	Input Sampling Rate [Hz]
0x00	8000
0x01	11025 (or 11000)
0x02	16000*
0x03	22050 (or 22000)
0x04 - 0xFF	Reserved

Cepstra Vector Dimension / type Table

Code	Value
0x00	13
0x01	24
0x02 - 0xFF	Reserved

Language Table

Code	Description
0x00	English
0x01 - 0xFF	Reserved

Fig. 5

0000FF"425E0260

Profile Table

Code	Description
0x00	Recognition only - Only Cepstra is available in this file
0x01	Reconstruction enabled - Cepstra and pitch is available in the file
0x02- 0xFF	Reserved

Speech and Silence Segment Headers (5 Byte)

Field Name	M/O	Number of bytes	Value(s)	Description
Segment type	M	1 byte	0x00 or 0x01	Index into segment type table below (speech or silence)
Number of frames	M	4 bytes	0-(2^31-2) or 0xFFFFFFFF	The total number of frames in this segment

End of Stream and Data Segment Headers

Field Name	M/O	Number of bytes	Value(s)	Description
Segment type	M	1 byte	0x02 or 0x03-0xFF	Index into segment type table below (end of stream or data)
Segment length < Ancillary Data >	M	4 bytes	5-(2^31-1)	The total number of bytes in this segment
	O			Place optional data here

Fig 6

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00000000000000000000000000000000

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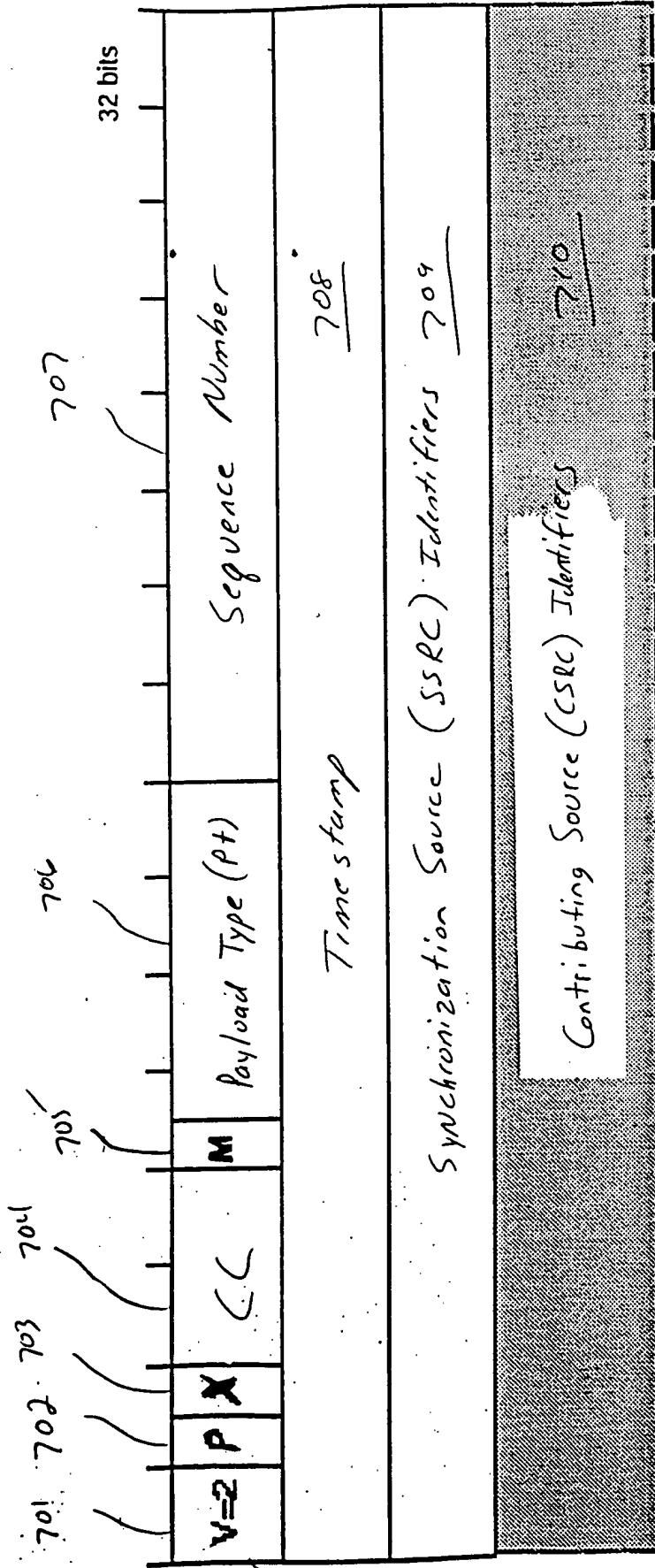


Fig. 7

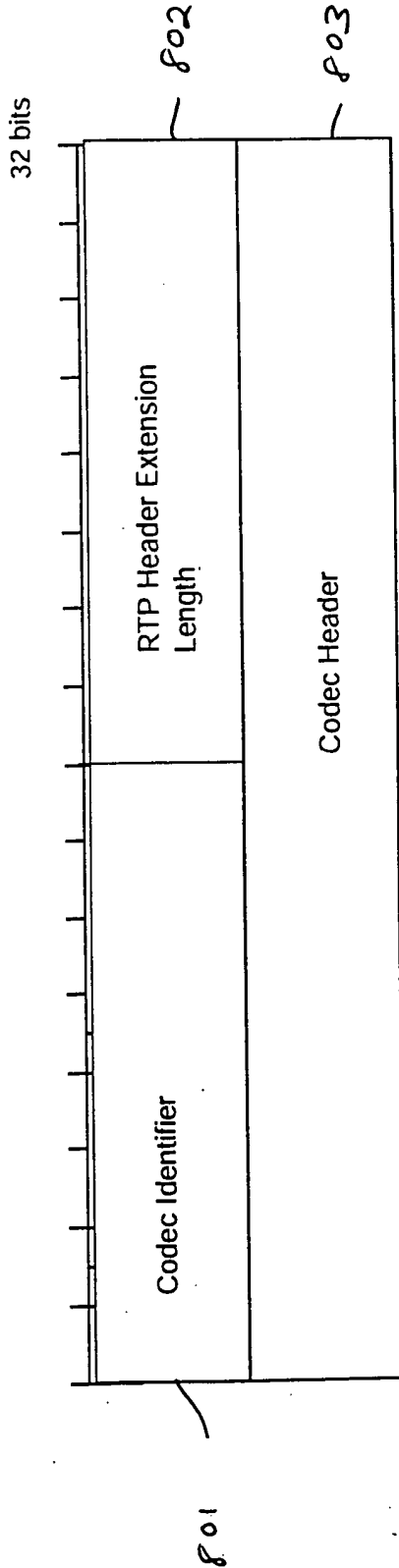
(Prior Art)

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00000000000000000000000000000000

RTCCP

RTP initiated around RecoVC.xxx with X=1
or Changes of CODEC:



800

Fig. 8

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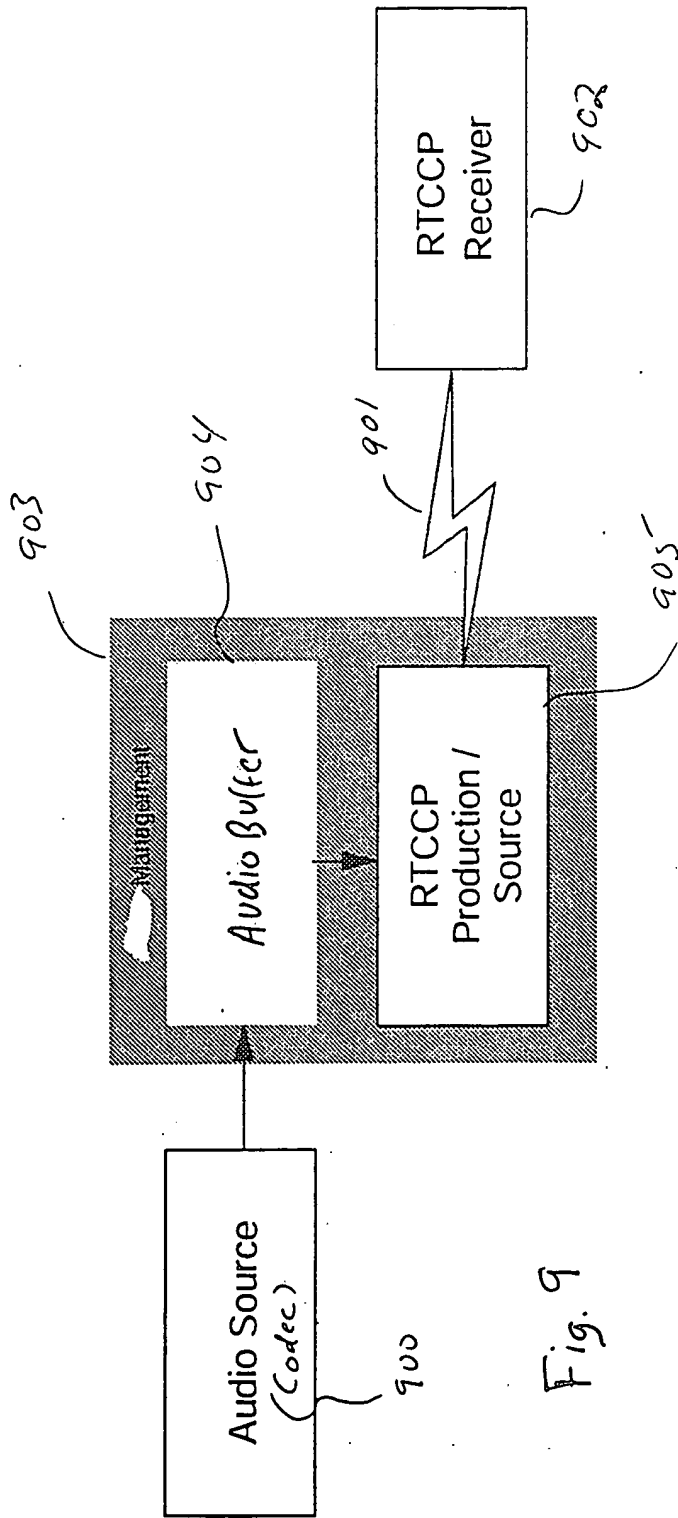


Fig. 9

Protocols structure:

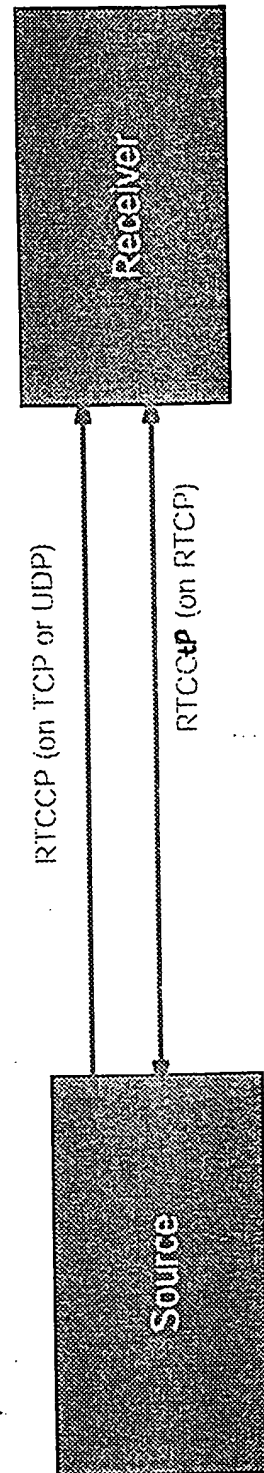
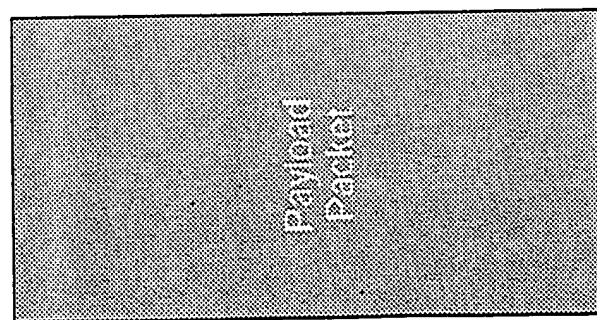


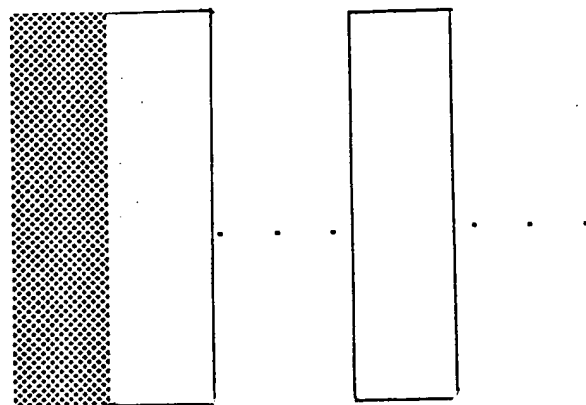
Fig. 10

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Packet-Based format:



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Intra-frame

N Inter-frames

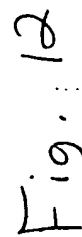
1 Packet =
one or more blocks

Block

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Fig. 10

(91E-828) 1571510-000-620K
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Li⁺ ... δ^-

DOTNET 1450460

RTCDP wrapper/proxy for browsers and servers

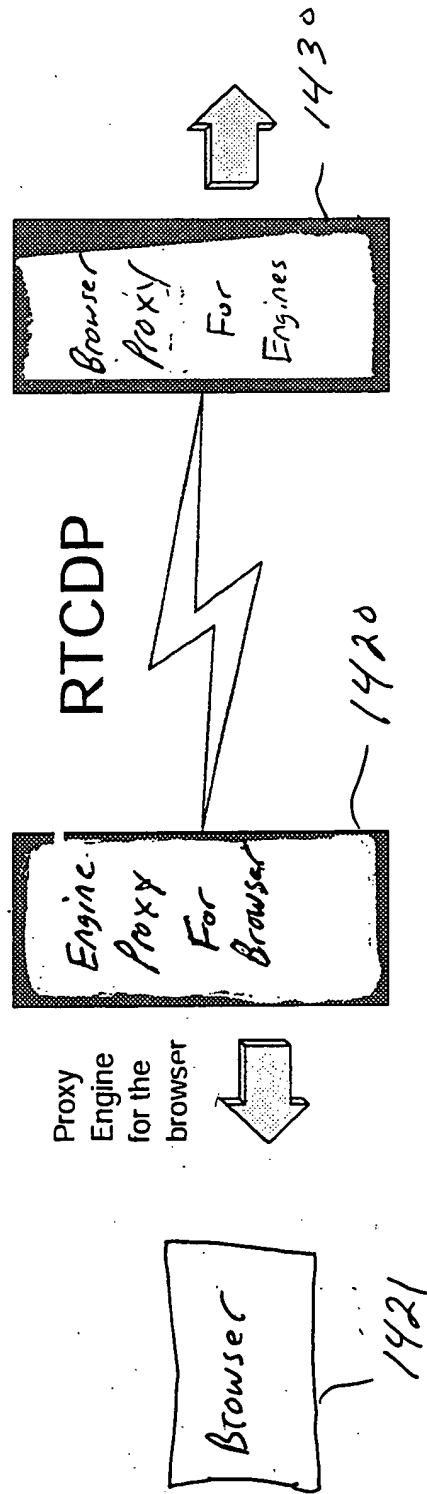


Fig. 14a

Protocols structure:

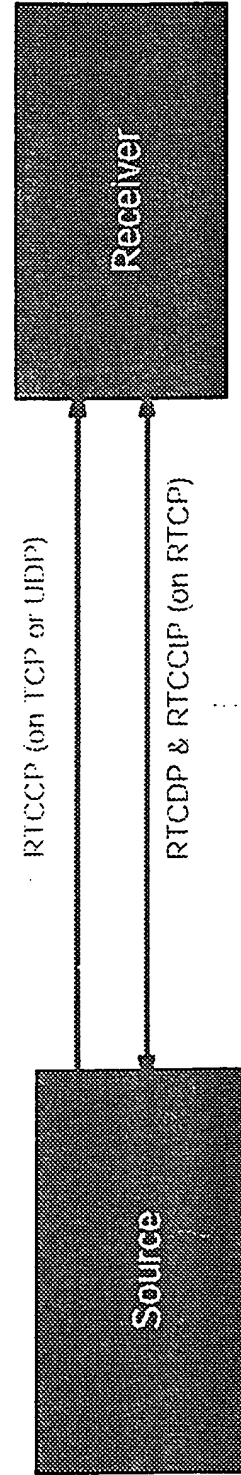


Fig. 1b

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DOTNET-1250260

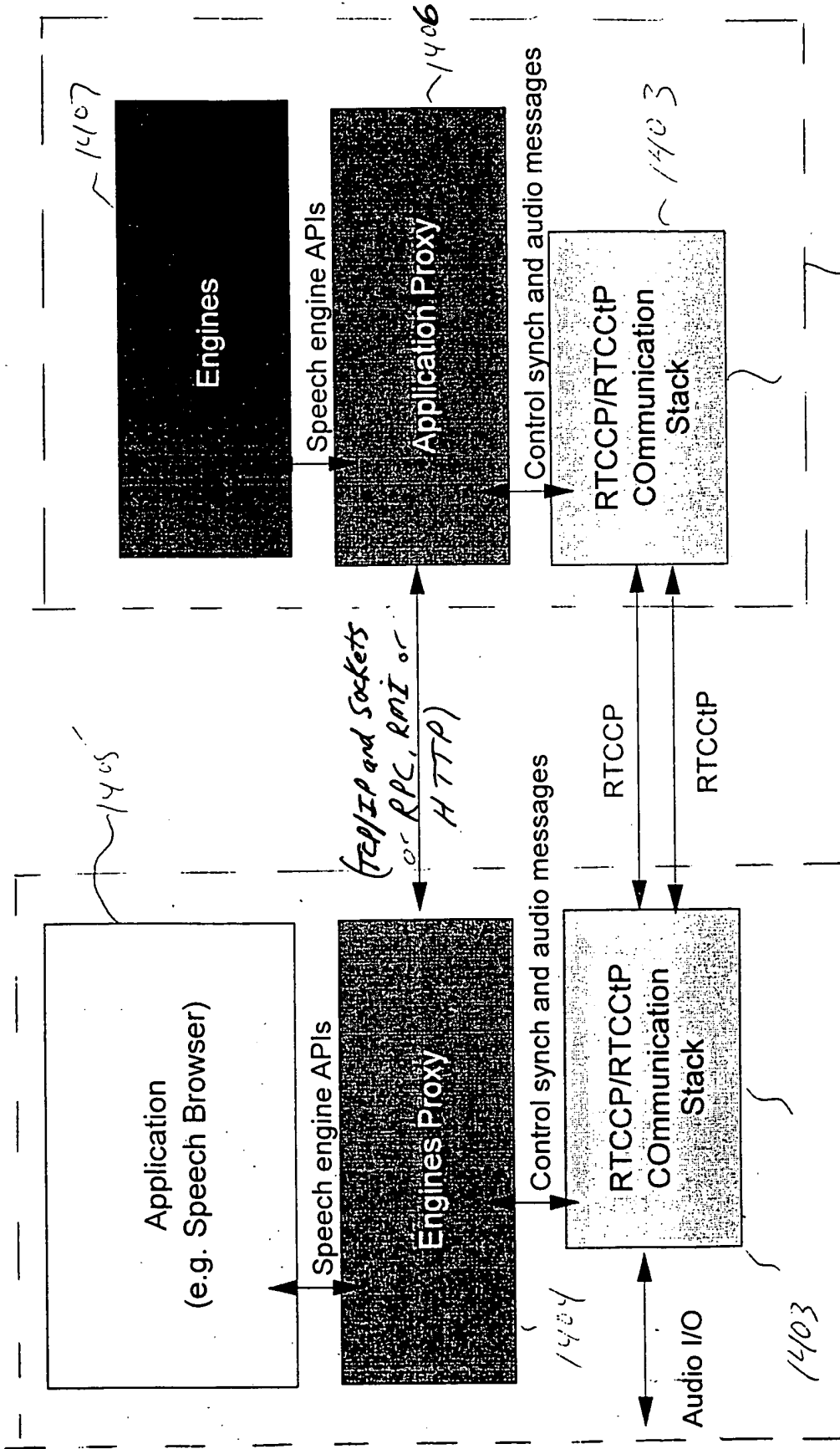


Fig. 14/6

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CONFIDENTIAL

Conversational protocols (Umbrella stack)

Higher Level
APIs

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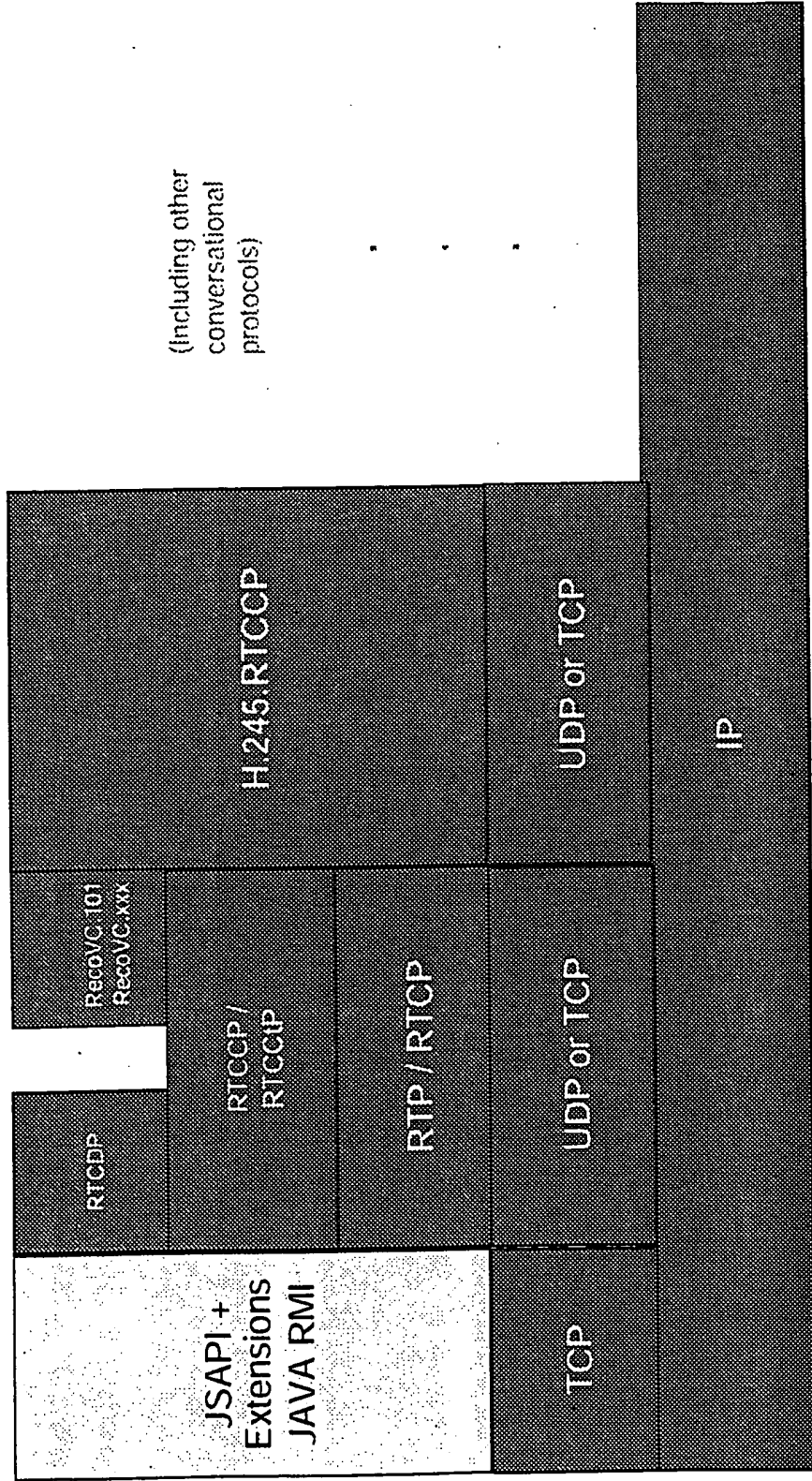


Fig. 15

DOTNET-14560260

RTSCDP - Real Time Streaming Conversational Distributed Protocols

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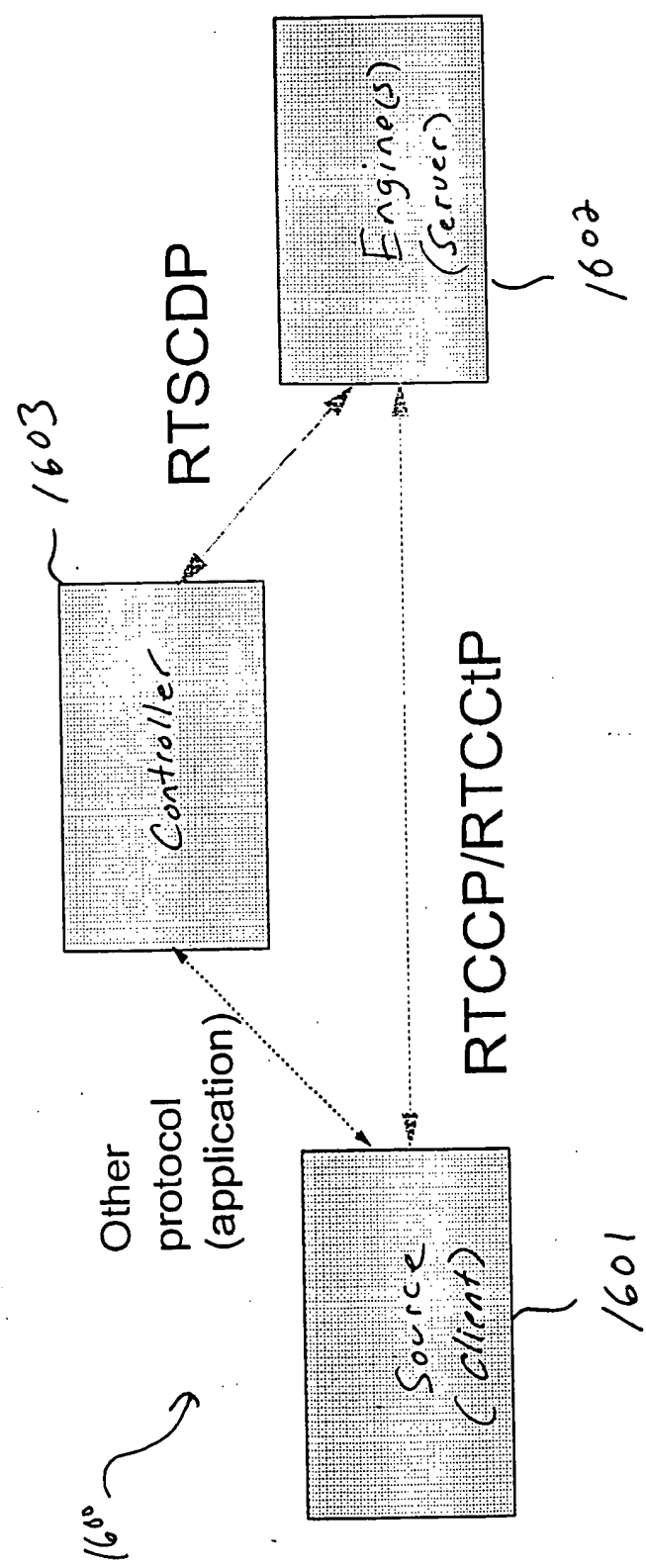


Fig. 16

000000-11500000

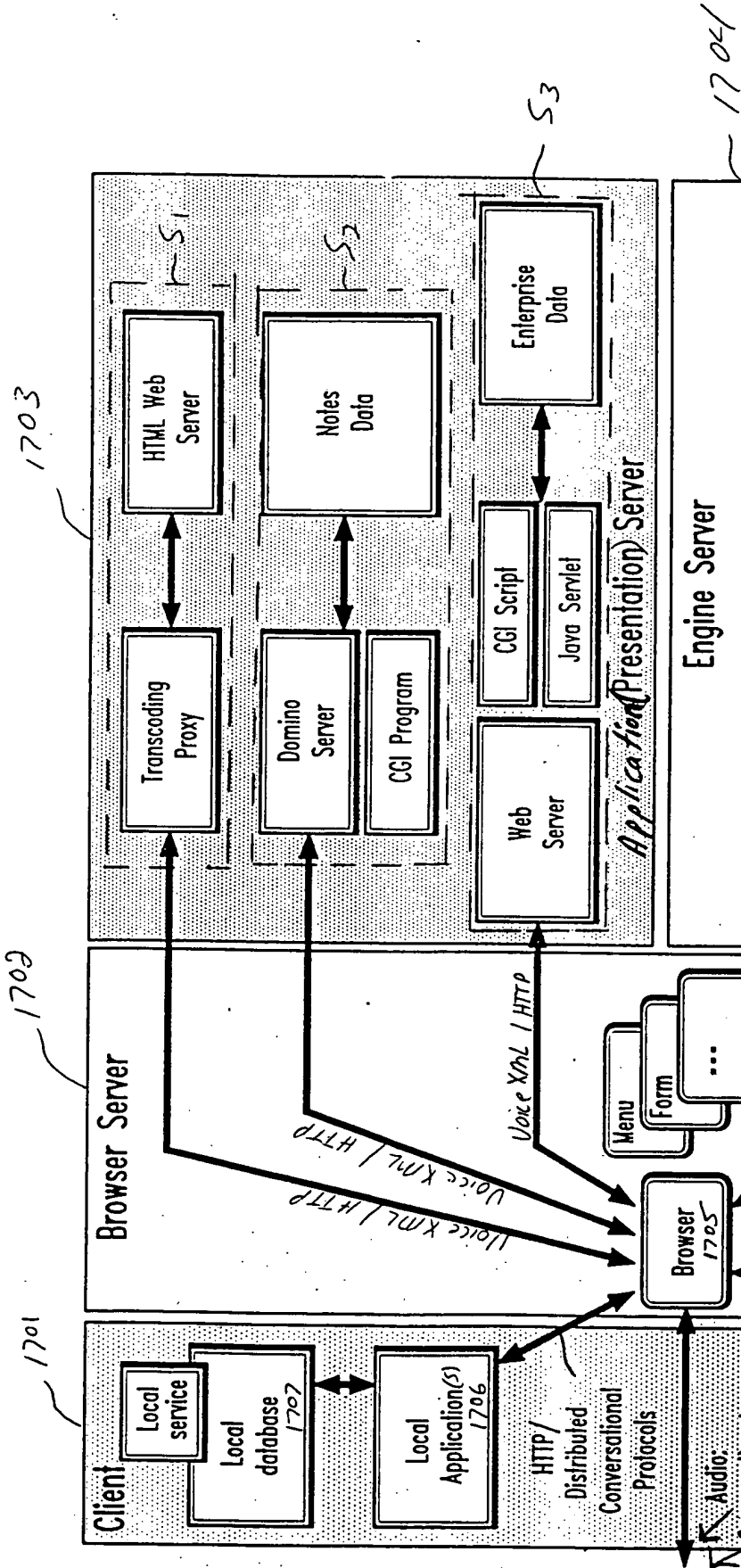


FIG. 17

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000001-1250250

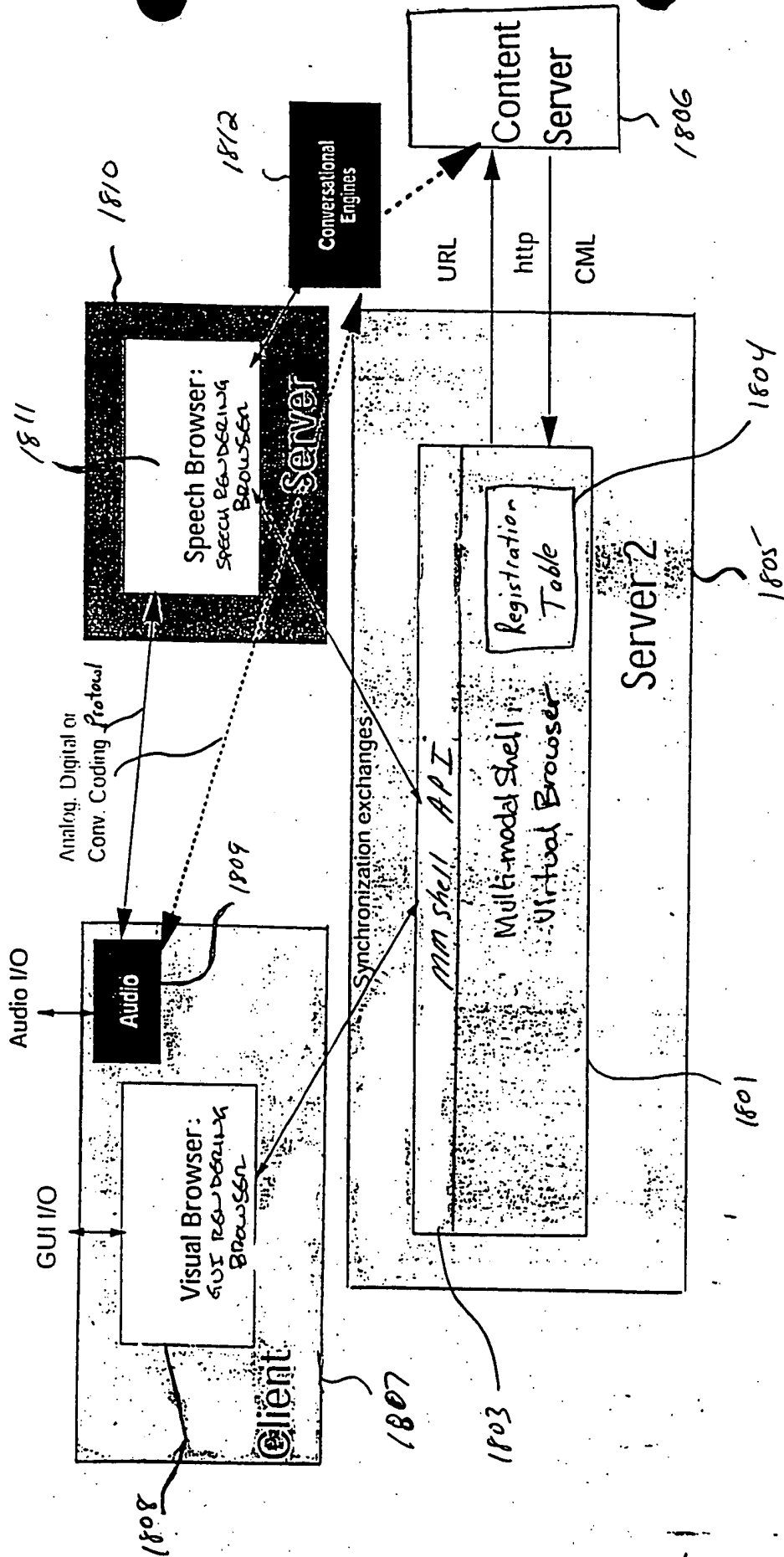
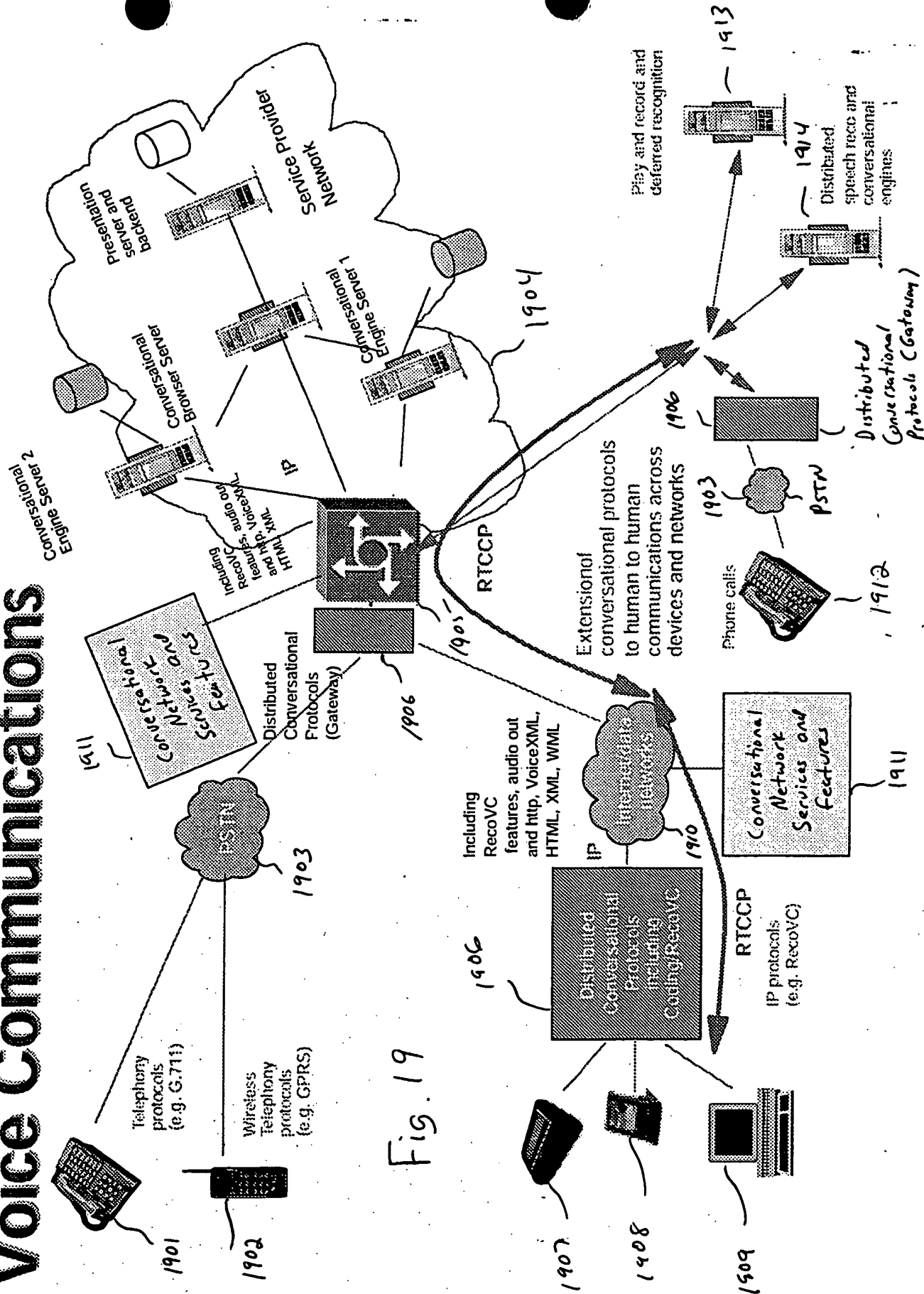


FIG. 18

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Y029-2000-0154US1 (8728-3X)

Conversational Voice Communications



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Yale 2000-0154 US (828-376)